

# OXYDUR F

Resin based mortar for corrosion resistant brick and tile linings, particularly for alkaline and hydrofluoric acid conditions

## Base

Polyester resin, unsaturated

## Material Group

Mortars, Jointing Materials

## Description

2-component synthetic resin based mortar for jointing and bedding of acid resistant and ceramic tiles and bricks.

## Use

Bedding and jointing mortar for tile linings and brickworks especially with strong chemical load e. g. against higher concentrated acids or bases or oxidizing media as well as fats and oils.

For use under severe alkaline conditions as well as hydrofluoric acid or hydrofluorosilicic acid, OXYDUR F should be preferred over OXYDUR A.

## Properties

- cures at normal temperatures without subsequent heat treatment
- Workable with jointing injector
- thermal resistance up to 100 °C

## Physical Data

Property (unit), Test method	Value
Density [g/cm <sup>3</sup> ], DIN EN ISO 1183-1, ASTM D 792	2.7
Flexural strength [MPa], DIN EN ISO 178, ASTM C 580	27.0
Compressive strength [MPa], DIN EN ISO 604, ASTM C 579	87.0
Modulus of elasticity [MPa], DIN EN ISO 178, ASTM C 580	10500
The thermal coefficient of linear expansion [1/K], ISO 11359-2, ASTM C 531	3.2 x 10 <sup>-5</sup>
Thermal conductivity [W/mK], ISO DIS 22007	1.0
Tensile Strength [MPa], DIN EN ISO 527, ASTM C 307	15.0
Lowest working temperature [°C]	10
Maximum working temperature [C]	30
Temperature resistance [°C] wet conditions	100
Temperature resistance [°C] dry conditions	100

Data are mean values

## Chemical Resistance

For detailed information about the chemical resistance please refer to Technical Information TI 300.

Please contact our application engineering for approval of the project-specific possible application.

## Substrate

Uneven spots should be levelled in the substrate already. Do not apply the mortar directly to the substrate! If the substrate is not provided with a surface protection system, apply with a suitable primer and sprinkle if necessary. Please contact our Application Technology Department for possible solutions.

Usually the mortar is applied onto STEULER-KCH's coating systems or rubber linings.

### Concrete / screed

Refer to DIN EN 14879-1 as well as to STEULER-KCH-Formsheet 010.

To attain a sufficient adhesive tensile strength, the substrate is generally to be pretreated in such a way that it is free of cement slurry, cement skin, loose and crumbly particles, structure imperfections and separating substances.

The residual moisture of cementitious substrates must not exceed 4 %.

### Steel

Refer to DIN EN 14879-1 as well as to STEULER-KCH-Formsheet 020.

The steel surface shall be sandblasted to a metallic bright finish. A preparation degree of SA 2 ½ as specified in DIN EN ISO 12944-4 and a roughness grade "medium (G)" as specified in DIN EN ISO 8503-1 must be achieved; minimum surface roughness  $R_z = 70 \mu\text{m}$ . After blasting, the formation of new rust must be prevented by suitable measures, e. g. priming directly.

The substrate should have a temperature of approx. 10 – 25 °C.

### Moisture

During application, the substrate must be kept absolutely dry. Uncured material has to be protected from any kind of moisture (condensation, fog, precipitation or other water source). Distance to dew point has to be at least 3 K, at a relative humidity of above 70 % at least 5 K.

## Packaging / Shelf life

All components must be stored and transported dry and frost-free. The minimum storage life applies to a storage temperature of 20 °C, unless otherwise specified. Higher temperatures reduce, lower temperatures increase the shelf life.

Components	Item number	Package	Content	Shelf life
Oxydur-A-Solution	5036007001	Drum	25 kg	6 Months
Oxydur-F-Powder	5011104001	Bag	25 kg	24 Months

For handling, transport and storage observe the relevant material safety data sheets.

## Mixing Ratio / Consumption

### Oxydur F Mortar

	Part by weight	Part by volume
Oxydur-A-Solution	1.0	0.94
Oxydur-F-Powder	5	3.85
Consumption	2,700 kg/litre mortar mass	
Add 10 % buffer to the calculated project demand for bedding and jointing.		

Bricks or tiles shall be laid in such a way that the horizontal joint is at least 4 mm but not more than 10 mm. In cases where it is necessary to work with a thicker bed joint, it is advisable to prefill the substrate, whereby the prefilling must not be thicker than 5 mm. Total thickness of bedding must not exceed 15 mm.

### Consumption of mortar

Split tiles 240 x 115 x 20 mm	approx. 7.5 l	20.25 kg/m <sup>2</sup>
Split tiles 240 x 115 x 40 mm	approx. 9.5 l	25.65 kg/m <sup>2</sup>
Bricks 240 x 115 x 65 mm	approx. 11.5 l	31.05 kg/m <sup>2</sup>
Bricks 240 x 115 x 80 mm	approx. 13 l	35.1 kg/m <sup>2</sup>

Full-saturated installation (horizontal joint 5 mm / butt joint 7 mm)

### Pot Life

Pot life depends on temperature:

20 °C	approx. 30 - 40 minutes
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Low temperatures prolong, higher temperatures shorten the processing time.

Add Oxydur-Inhibitor that way that pot life is min. 30 and max. 40 minutes.

## Curing times

To support foot traffic at surface temperature of:

Temperature	Min. Time
10 °C	8 h
20 °C	4 h
30 °C	3 h

The finished coating is fully chemically resistant after 5 days at 20 °C.

## Safety and Disposal

- Sufficient aeration and de-aeration (especially in tanks and pits).
- No smoking/no fire
- Refer to the Safety Data Sheets
- Observe danger references and safety recommendation labels.
- Wear required personal protective equipment (avoid skin contact with materials)
- Clean and protect hands with skin protective soap and skin protection cream (no solvents)
- Wear a dust mask when sanding (e.g. for repairs).
- Instructions as per § 14 of GefahrstoffV (Toxic Substances Act) and TRGS 507 (Technical regulations for Hazardous Substances - Germany)
- Accident precautions issued by the Liability Insurance Association for the Chemical Industries (Germany)

Do not expose materials to heat or open flame, this applies in particular to welding works (weld beads).

Preferably consume residual quantities. Do not pour into a spout or dustbin! Collect separately for disposal in durable, lockable and labeled containers.

## GISCODE

Product	GISCODE
Oxydur F	SB-STY 10

## Cleaning of Equipment

Tools soiled with uncured materials can be cleaned with STEULER UNIVERSAL CLEANER (Technical Information TI 190). Only clean in well ventilated areas.

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This issue replaces all previous versions.